

REMARKS/ARGUMENTS

Amendment of Claims:

Claim 10 is herein amended by incorporation of the limitation of Claim 11, thus accepting the suggestion previously provided by the Examiner for
5 related language of Claim 19, and cancellation of Claim 20. Claim 11 is herein canceled.

Remarks/Arguments:

The Office Action of May 4, 2010, rejects claims 19 and 21-23, on the basis that the claims are directed to non statutory subject matter, under 35 USC
10 101.

The Office Action further rejects claims 10-14, 19 and 21-23, as being unpatentable over Rudell et al. (5,195,745) in view of Turangen (5,316,294).

The rejection of claims 19 and 21-23 under 35 USC 101 is based on the Examiner's contention that these claims are "directed to a method or process
15 claim that does not transform underlying subject matter (such as an article or materials) to a different state or thing, nor are they tied to a particular machine."

Specifically, Examiner contends that "In this case, 'the method of training a player to support a football for kicking by another player' is not considered to be tied to a particular machine because it does not require that the
20 method be implemented by a particular machine. The claimed invention is broad enough to read on a purely mental process. The specification sets forth that the football (*sic*) may use a thimble to hold the football in position. A thimble is not considered by this examiner to qualify as a 'particular machine', nor does the thimble transform a particular article. The thimble does not
25 implement the process steps, but is merely a means upon which the process operates."

Applicant presumes that the quoted sentence, "The specification sets forth that the football may use a thimble to hold the football in position." was intended to specify that "a player" rather than "the football" may use a thimble.

30 Applicant submits that the Office Action does not describe the invention accurately, and mischaracterizes the specification and the claims.

The “underlying subject matter (such as an article or materials)” is not “a thimble”, which “a player” may “use to hold the football in position.” This description, and characterization of the claimed process, suggests that both the thimble and the football are unmodified, commercially available articles. This
5 description and characterization are incorrect in several ways:

1. The description indicates that the “underlying subject matter” is singular, that is “a thimble”, and that it is a generally available article.

2. The underlying subject matter is a novel combination of two articles, having specific, complementary structural features which are releasably attached
10 (engaged) at specific points in one step of the process, and then disengaged in a subsequent step.

3. During the multiple steps of the process, the two novel articles are specifically attached (engaged) and then disengaged, thus the physical status of the articles is altered during the process, which is not purely mental.

15 4. Patentable subject matter (specifically a “particular machine”) is not restricted to complex machinery, as the Office Action could suggest. The current invention solves a significant, long-recognized need with an elegant use of relatively simple, but specific and novel structures and processes.

5. The current invention is in the field of training, specifically in the
20 training of football players to improve their learning of well-established performance components. The process described and claimed does not only enable a football to be held by “a thimble” so that it can be kicked, as the Office Action suggests; an equivalent function could be provided by a support resting on the playing surface. The intended purpose of the invention is to aid in the
25 training of the player holding the football; the engagement and disengagement steps provide a physical input to the player. As described in the specification, this tactile feedback to the player holding the football provides a desired training experience through physical interaction (page 1, lines 16-19; page 4, lines 6-9).

There is an extensive technical basis for the establishment, in the field of
30 training in football performance, of desired performance components.

There is also an extensive technical and experience basis for recognition of a need for improved training methods to assist personnel in many fields, including athletes, military personnel and others, to improve physical performance components important to their skills. Tactile feedback is
5 recognized as an important element of such training methods (Appendix A) and the use of complementary attachment materials, such as hook and loop fabric, is useful in providing such tactile feedback.

Applicant has reviewed all references cited, and found that none recognize the same problem, or show the present invention or render it obvious.

10 All references cited disclose singular articles (footballs, thimbles or gloves) rather than combinations of complementary articles as disclosed and claimed in the current invention.

The primary essence and novelty of the present invention is the design and use of small, complementary structures (a patch on a football and a pad on a
15 finger, of mating hook and loop material) located specifically at desired spots (the tip of the football and the fingerpad) in order to utilize the specificities of both the placement of the patch and pad, and the mating of their materials, to provide tactile feedback to the player holding the football only when the desired locations of the player's finger and of the football are in contact as desired, and
20 are disengaged as desired.

Rejection of Claims Under 35 U.S.C. § 103

The rejection of claims 10-14, 19 and 21-23, as being unpatentable over Rudell et al. (5,195,745) in view of Turangen (5,316,294) is based on the contention that Rudell shows a football having hook and loop material patch or
25 patches, and a glove, strap and band having complementary patches, but that, although "Rudell et al. does not expressly disclose the patch being positioned on either of said tapered ends" it would have been obvious at the time of the invention to have "positioned at least one patch on the tip of Rudell's football" in view of Turangan, "the motivation being to aid in catching the football with a
30 mitt, glove, band, etc."

With regard to claim 10, Applicant argues that it would not have been obvious to one of ordinary skill in the art at the time the invention was made to have positioned at least one patch on the tip of Rudell et al.'s football, "the motivation being to aid in catching the football with a mitt, glove, band, etc."

5 At the time of Rudell et al.'s invention (1993), Turangan had not been disclosed (1994), and the teaching of Turangan to include VELCRO over the ends of a football, would not have been available.

Further, the inventions of Rudell et al. and Turangan, and the current invention are in distinct fields having distinct purposes and motivations; their
10 requirements are not only distinct, but are essentially mutually exclusive.

Rudell would have had no motivation to position a patch on the tip of a football.

Rudell et al.'s motivation is improving the training of players in the throwing of footballs, Turangan's motivation is enhancing the catching of footballs and the present invention's motivation is enhancing the training of
15 players in the holding of footballs for kicking. Although there are superficial similarities in some components of these inventions, they are distinct and mutually exclusive in features that determine their design, structures and use.

The force of attachment of the complementary hook and loop material is used in Rudell et al. to impart angular momentum to the thrown football,
20 specifically to the midsection, to produce a spiral spin of the football; as the football is thrown, the hook and loop material disengages. The amount of hook and loop material on the football is restricted to the minimal amount required to produce a spiral spin, to maintain acceptable aerodynamics of the football.

The much more extensive coverage, in Turangan and in other products
25 discussed by Rudell et al., of the thrown projectile and the catching glove with complementary hook and loop material is used to insure that the thrown projectile will firmly attach to the catching glove even if the two are not well aligned. Disengagement is not an essential step in the act of catching the projectile; the hook and loop material functions essentially as an adhesive, rather
30 than to transmit force.

The present invention utilizes the releasable attachment (engagement) of the complementary mating structures to provide tactile feedback to the holder of the football, first that the player's finger is holding the tip of the football in the desired location, and second that the football has been kicked and the mating
5 structures disengaged. The force of attachment does not significantly affect the football's performance. The restricted location desired for effective positioning of the player's finger on the football tip is patentably distinct from the location of the patches on the football of Rudell et al., and from the extensive coverage on the thrown projectile of Turangan.

10 The technical bases, and established best practices, for the required skills of each of these fields have been well-known and accepted in the field for many years (e.g., for throwing a football, see Appendix B). The well-recognized need has not been for advances in these technical bases and these practices, but in improved and more effective training aids and training methods for the
15 acquisition and enhancement of these skills.

With regard to throwing a football, it is well known in the field that throwing optimally requires orienting the long axis of the football in the intended direction of the throw, and imparting a spin around the long axis of the football as an integral part of the throwing action. The gyroscopic spin of a
20 football around its long axis (1) optimizes the stability and length of the trajectory of the football, (2) minimizes air resistance by presenting the smallest profile to the air and. (3) reduces or prevents wobbling or tumbling of the football, thus reducing or preventing air turbulence.

Rudell et al. specify (col. 1, lines 6-8) that the field of the invention is
25 "sports in which it is necessary to impart a spin to a thrown object such as a football or a toy flying disc..."

Rudell et al. specifically teach away from modifications of the football such as that later disclosed in Turangan. Rudell et al. describes and evaluates the prior art of such aids and methods extensively (col. 1, line 18-col. 2, line 31)
30 and specifically describes and excludes from the purpose of their invention, balls and other projectiles "such as are required for projectile catching toys" (col. 2,

lines 4-18), which require “more than minimal amounts of VELCRO material.”
The product of Impulse, Ltd. is described unfavorably (col 1, lines 44-55),
“wherein the entire surface of each of the items, as well as significant areas of
the gloves, were covered in the hook and loop material identified with the
5 registered trademark VELCRO, to enable users to catch the items better. The
purpose of these items was to improve catchability.” (*Emphasis added.*)

Ruddell et al. specifically explain (col. 2, lines 4-8) that the objective of
their invention, to train players in the skill of imparting a spin to a thrown object
such as a football, is in direct conflict with the use of more than minimal
10 VELCRO, as generally used in throwing objects designed for improved
catchability. Enhanced catchability, achieved by more extensive use of
VELCRO, necessarily conflicts with the ability of the football or other throwing
object to be imparted a spiral (gyroscopic) spin, which is the object of the
invention. Use of larger amounts of hook and loop material than required
15 prevents the desired release of the football (col. 4, lines 9-35), and substantially
increases air resistance of the otherwise smooth football surface, modifying the
aerodynamic properties depending on the amount and placement of the hook and
loop material.

The field of invention of Turangan is generally “apparatus useful in a
20 game of catch and more specifically to a glove a ball provided mutually
attractive materials facilitating the game of catch.” (*Emphasis added.*)” (col. 1,
lines 7-10)

The Office Action acknowledges the motivation of this field of
invention: “In view of Turangan it would have been obvious to one of ordinary
25 skill in the art at the time of the invention was made to have positioned at least
one patch on the tip of Rudell et al.’s football, the motivation being in order to
aid in catching the football with a mitt, glove, band, etc.”

To the contrary, Rudell et al. could not be more specific and explicit in
rejecting the motivation and teaching of catchability, and of the use of hook and
30 loop material except as described and claimed by Rudell et al., as contrary to the
design and purpose of their invention.

Further, to optimize the distance and trajectory of a thrown football, by imparting a spiral spin about the long axis as an integral part of the throwing action, the player typically grips the football at or near the midpoint, with fingers extended to maximize the radial momentum imparted to the football (Rudell et al., col 3, lines 32-41). Rudell et al. disclose and claim the placement of small hook and loop patches at or near the midpoint of the football (Fig. 4-9; col. 4, line 18-col. 5, line29) , to provide interaction and tactile feedback to the players fingers, through the complementary hook and loop material of the glove, strap or band of the player's throwing hand. It is obvious that imparting a motion or momentum other than the desired spiral spin about the long axis, such as would be imparted by the interaction of a glove, strap or band of the player's throwing hand with a patch on the tip of the football, would conflict with the desired spiral spin about the long axis, and would increase the probability of an undesired wobbling or tumbling motion.

Ruddell et al. thus teach away from the placement of a patch or patches of hook and loop material at the tip of a football. For this and other reasons, Ruddell et al. is thus patentably distinct from the current invention. Rudell et al. is specifically cited in the specification of the present invention (page 3, line 29; page 4, line 3) as structurally distinct from the present invention in this feature.

Turangan is in the field of enhancing the catchability of footballs and other projectiles, and specifically discloses and claims gloves, balls and other projectiles having extensive coverings of hook and loop material, in order to enhance catchability of thrown objects. Turangan teaches away from the placement of patches limited in size, on a football and a thimble, as disclosed and claimed in the present invention.

Applicant submits that such a modification would represent hindsight, rather than an obvious modification of prior art.

The Office Action rejects claim 11 on the basis that Rudell et al. show that mating fastener elements disengage upon a player handling said football. Claim 11 was dependent on claim 10 (now amended); the limitation of claim 11 has been incorporated into claim 10. Applicant argues that the rejections based

on Rudell et al. are overcome by this amendment and the remarks. Further,
Applicant argues that the disengagement of mating fastening elements due to a
“player handling said football” in Rudell et al. is distinct from the
disengagement of mating elements due to the football being kicked by a second
5 player, in the present invention,

The Office Action rejects claims 12 and 13 on the basis that Rudell et al.
show that mating fastener elements comprise hook and loop elements. Claims
12 and 13 are dependent on claim 10 (now amended). Applicant argues that the
rejections based on Rudell et al. are overcome by this amendment and the
10 remarks.

The Office Action rejects claim 14 on the basis that Rudell et al. show
that the material of the glove is an elastic material. Claim 14 is dependent on
claim 10 (now amended). Applicant argues that the rejections based on Rudell
et al. are overcome by this amendment and the remarks.

15 The Office Action rejects claims 19 and 21-23 on the basis that during
normal operation of the Rudell et al. device, the method steps set forth by
applicant in the claim is inherently provided.

Applicant argues that the method steps set forth in claims 19 and 21-23
are obviously and patentably distinct from the steps of the normal use and
20 operation of the Rudell et al. device. The underlying subject matter (“particular
machine:”) of the method set forth in claims 19 and 21-23 is distinct from that of
the Rudell et al. device. The method steps set forth in claims 19 and 21-23
require specific actions of two players, a football holder and a football kicker,
and require the specific use, including specific orientation, of two devices, a
25 modified football and a modified thimble. Rudell et al. requires one player, a
football thrower, and two devices which are patentably distinct from devices of
the present invention, as the above remarks and arguments specify. The normal
use and operation of the Rudell et al. device provides a thrown football having a
spiral spin; the method steps set forth in claims 19 and 21-23 provide tactile
30 feedback and other experience to the football holder, and a kicked football.

Each of the steps of the method set forth in claims 19 and 21-23 is distinct from the steps of the normal use and operation of the Rudell et al. device.

Applicant argues that the rejections based on Rudell et al. are overcome by the remarks and arguments of this response.

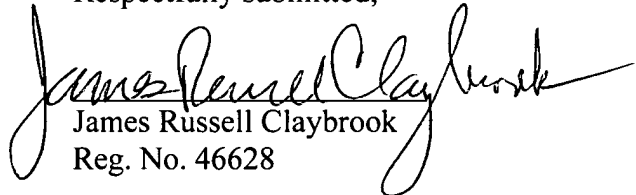
5 For all of the above reasons, Applicant submits that the claims of the present invention are directed to statutory subject matter, and that the present invention is patentable over Rudell et al., in view of Turangan, and Applicant respectfully requests reconsideration and withdrawal of the Office Action's objections under 35 USC § 101 and under 35 U.S.C. § 103.

10 **Conditional Request For Constructive Assistance**

Applicant has amended the specification and claims of this application so that they are proper, definite, and define novel structure which is also unobvious. If for any reason this application is not believed to be in full condition for allowance, Applicant respectfully requests the constructive
15 assistance and suggestions of the Examiner pursuant to M.P.E.P. § 2173.02 and § 707.07(j) in order that the undersigned can place this application in allowable condition as soon as possible and without the need for further proceedings.

Respectfully submitted,

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James Russell Claybrook
Reg. No. 46628

25 James Russell Claybrook
P. O. Box 843
New Hampton, New York 10958
Tel.: (845) 551-9266